



The Plantsman

NEW HAMPSHIRE PLANT GROWERS ASSOCIATION

APRIL / MAY 1999



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May

8 "HERITAGE PLANT SALE," 9:30-2, Strawberry Banke, Portsmouth, NH; 603-436-1100.

June

17 CONNECTICUT GREENHOUSE GROWERS ASSOCIATION "EVENING AT THE GREENHOUSE," Woodland Gardens, Manchester, CT (Joint program with Connecticut Nurserymen's Association); to register: 203-261-9067

18-19 (Friday: 5-8pm; Saturday: 9am-2pm) ELEVENTH ANNUAL POCKET GARDENS OF PORTSMOUTH TOUR, sponsored by South Church, 292 State Street, Portsmouth, NH; 603-436-4762

24 NEW HAMPSHIRE PLANT GROWERS ASSOCIATION TWILIGHT MEETING/ GARDEN CENTER EVALUATION WORKSHOP, Spider Web Gardens, Center Tuftonboro, NH; Ann Hilton at 603-435-6425, workshop information: Dave Seavey at 603-225-5505

26 "HAY DAY"—a family day at The Fells, John Hay National Wildlife Refuge, Newbury, NH; 603-763-4789

July

21 MASSACHUSETTS NURSERY AND LANDSCAPE ASSOCIATION SUMMER MEETING, Forest Park, Springfield, MA; 413-369-4731

21 "CRUISE INTO LAKE SUNAPEE'S PAST," 4:30-6:30pm, Sunapee Harbor; information and reservations: Friends of John Hay National Wildlife Refuge at 763-4789

22 OPEN HOUSE, W.H. Milikowski, Inc., 10 Middle River Road, Stafford Springs, CT; 1-800-243-7170

August

4 NEW HAMPSHIRE PLANT GROWERS' ASSOCIATION SUMMER MEETING, Pleasant View Gardens Pembroke Facility, Pembroke, NH; information: Robert Demers at 603-625-8298

8 NEW ENGLAND NURSERY ASSOCIATION AND RHODE ISLAND NURSERY AND LANDSCAPE ASSOCIATION JOINT SUMMER MEETING, The Glens; 508-653-3112

14 CONNECTICUT NURSERYMEN'S ASSOCIATION SUMMER MEETING, Burnett's Landscaping and Salem Country Gardens, Salem, CT; 203-445-0110

13 BENEFIT AUCTION, The Fells, John Hay Memorial Wildlife Refuge, Newbury, NH; 763-4789

14 EIGHTH ANNUAL PLANT SALE, The Fells, Newbury, NH; 763-4789

25 OPEN HOUSE, Griffin Greenhouse and Nursery Supply, 1619 Main Street, Tewksbury, MA; 978-851-4346

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Cover: praying mantis, photo by Mike Cherim.

Pages 1 and 22: Candia Gardens
Photos by Rick Raymond.

The Plantsman is published in early February, April, June, August, October, and December with copy deadlines being the first of each prior month. While camera-ready ads are preferred, set-up assistance is available at a nominal fee. Free classified advertising is offered as a member service. We will carry a short message (no artwork or logos) for one or two issues of *The Plantsman*.

AD SIZE	6x	1x
3 3/8" w x 2 1/4" h	\$150	\$30
3 3/8" w x 4 3/4" h	\$200	\$40
7" w x 2 1/4" h	\$200	\$40
7" w x 4 5/8" h	\$300	\$75
7" w x 9 1/2" h	\$500	\$100

For further information, please contact the editor: Robert Parker at the UNH Research Greenhouses, Durham, NH 03824, 603-862-2061; or PO Box 5, Newfields, NH 03856, 603-778-8353.

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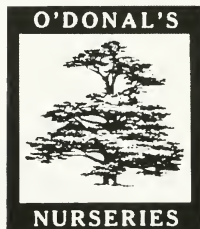
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A Message from Your President

BOB RIMOL

As the big spring rush is about to unfold, we all hope for a healthy and prosperous season. And before long, it will be over. You'll have had a vision of what it should turn out to be and then you'll evaluate what really happened. We, as your board of directors, face a similar situation.

Back in January, we set the tone for 1999 with a vision for the New Hampshire Plant Growers' Association while, at the same time, looking back at what we accomplished in 1998. Last year was a tremendous year for the NHPGA. We began the New Hampshire Horticultural Endowment Fund, which will raise money for the sole purpose of horticultural research to help improve our businesses. We passed legislation exempting free-standing greenhouses from taxation, saving growers thousands of dollars. We had two outstanding twilight meetings, a great New England Greenhouse Conference, and successful Summer and Winter Meetings. And our presence is getting into more elementary schools through Ag in the Classroom. A big thanks to all of the people who helped make this happen.

1999 will present the NHPGA

with new challenges which will again require involvement from you, our members, to be successfully met. Our primary focus will be to improve our public image and increase membership. Marketing plans include possible changes with *The Plantsman*, a new logo, a new trade show booth, and a completely different exhibit at Farm and Forest. Hopefully, these changes will increase membership and increase public awareness of horticulture in the State of New Hampshire.

Our first focus will be *The Plantsman*. Unfortunately, we will be losing our editor, Bob Parker, after many years of outstanding and dedicated service. A new editor, along with increased production costs, could affect the format. However, we remain committed to providing our membership with a first-class and timely newsletter.

Next, a new logo will be designed and will be used as the focal point of a redesigned trade show display. This display is used to solicit membership at regional trade shows and meetings. After many years of abuse, our trade show booth has finally hit the end of the road. Actually, it did fall down a few times on the streets

surrounding the Hynes Convention Center. We are going to invest in a new tabletop display that is lightweight and more versatile. Again, this will project a new, fresh, and professional image.

We're in the process of redesigning our display at the Farm and Forest Show. Farm and Forest is geared toward families. Our goal is to incorporate a theme each year to spark enthusiasm, provide education, and get more people—whole families—to enjoy gardening as a hobby. Possible themes include: perennials, water gardens, bulbs, etc. We want to get people excited about the spring growing season.

All this leads into the final goal of increasing membership. Over the last few years, membership has stagnated. We are doing more for our members and for the industry and we should be growing! Get out and get friends and colleagues to join the NHPGA. We now have several categories, so membership is affordable for everyone. Increased membership will allow us to do more marketing and we will all benefit. Good luck in 1999!

Bob Rimol can be reached at 603-629-9004

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Winter Activities . . .

FARM AND FOREST. The NHPGA is putting new effort into promoting the industry. The general public is often uninformed and promotion first requires education—which, in turn, requires displays that attract interest. Promotion, education, interest—the NHPGA exhibit at this year's Farm and Forest Exposition in Manchester had all these in great quantity—it was a real show-stopper. Put together by Jeff Huntington, Pleasant View Gardens, the booth demonstrated how cuttings are rooted in today's greenhouse. The booth had rolling benches, ebb-and-flow watering, and a mist system. The interest generated was enormous.

The booth was manned—thanks to Nancy Adams, Ann Hilton, Dave Giurleo, Bob Rimol, and George Timm. And—thanks to Dave Giurleo and Ball Seed Company—free seed packets were given out—to get people starting their own and getting excited about filling their yards with flowers and shrubs this spring.

THE WINTER MEETING, held jointly with the NHLA on January 13, was an opportunity to hear other ideas and receive new information. The speakers—Diana Beauchain, Claire Nadon, and Pe-

ter Paveglio; Doug Cole; Evelyn King and Roger Coggeshall; Nancy Adams; Philip Sands; Lucinda Brockway—covered a range of topics—pesticide usage regulations, new plant material, historic gardens.... And there was good food and plenty of time to socialize.

The meeting was organized by Michelle Fischer, Mike Garrity, and Tim Wolfe; Guy Hodgdon and Chris Robarge coordinated administration and registration; George Timm helped keep the meeting flowing smoothly. These—and other people—created a useful, interesting day.

TRADE SHOW DISPLAY. Also this winter, the NHPGA applied for and received a New Hampshire Department of Agriculture, Markets, and Food Mini-Grant for the amount of \$500.00 for use in the development of a new trade show display. We thank George Timm for taking care of the work required for the application and the Department of Agriculture, Markets, and Food for the generous contribution of funds.

HORTICULTURAL ENDOWMENT: total pledges now add up to \$89,000. And of this, \$41,900 has already come in.

The first grant will be for \$1,000, to be awarded to a researcher working on a problem

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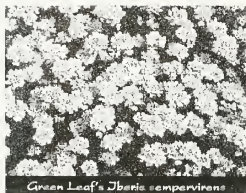
pertinent to New Hampshire's horticulture community.

Letters announcing the grant being offered will be sent to universities around the northeast and to regional grower publications. The process will be starting by the end of May. Grant applications will be due by September first and the grant will be awarded by No-

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member first.

This is an exciting time and members will be kept posted.

(For those wishing to contribute, checks made out to New Hampshire Horticultural Endowment can be sent to New Hampshire Horticultural Endowment, 7316 Pleasant Street, Loudon, NH 03301. For more information, contact Peter van Berkum at 603-463-7663 or Henry Huntington at 603-435-8361.)

MEMBERSHIP: Sometimes it's easy to forget that the New Hampshire Plant Growers' Association is a volunteer organization. Whatever happens does so through the efforts of its membership. The people who take time from their already busy lives to create memorable exhibits and programs deserve our thanks and recognition.

These events and the goals listed by Bob Rimol—educational meetings, newsletter, industry promotion, legislative clout—are all good reasons for membership.

There are three categories—Industry (\$50), Student (\$15), and Employee (\$15). Send address and check for the appropriate amount to New Hampshire Plant Growers Association, 56 Leavitt Road, Hampton, NH 03842. For more information, contact George Timm at 603-525-4728.

Position Opening

After many years of service to the NHPGA, Bob Parker is resigning from the editorship of *The Plantsman* this summer. We are searching for qualified candidates who are interested in becoming the new

editor. The job description is as follows: The new editor will be expected to:

- Work in conjunction with the NHPGA Board to determine the content of the newsletter
- Attend NHPGA events and report on these with news items and photos
- Collect, edit, and present pertinent industry news

Interested candidates should mail a resume and proposal by May 1 to: NHPGA
56 Leavitt Road
Hampton, NH 03842

Editor's note: in the last issue, the phone number for the Green Spot was given incorrectly. The correct number is 603-942-8925. Also, there is now a new e-mail address: <Info@GreenMethods.com>.

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The program consists of small grants that will be awarded to the best project proposals. Examples of projects that might fulfill the requirements of a grant would include IPM seminars, original IPM projects, publication of outreach materials, etc. There are two deadlines

for application submittal, which are July 2, 1999, and October 1, 1999. The purpose of this grant program is to initiate interest from a wide range of people, including homeowners, schools, structural pest companies, agricultural entities, etc.

The Department has grant applications that can be obtained in two ways: one is to call the Division of Pesticide Control at 603-271-3550 and have information mailed to you; the other is to download the application from UNH's Cooperative Extension website at <http://ceinfo.unh.edu/IPMLinks.htm>.

Please contact Peter Paveglio at the above number for more information on this program.

Bigger, Better...and Biennial

The Mount Washington Valley

Garden Trail, until now a yearly event in which gardening enthusiasts could follow a clearly marked map to view the entries in a gardening competition covering the entire mountain region, will not take place this year.

Instead, 1999 will be an time of rethinking and restructuring. With new energies and enthusiasm, the Garden Trail promises to be back in 2000, bigger and better than ever.

People interested in being part of this biennial event should contact Joan Sherman at 603-367-4764.

A New Educational Director

The New Hampshire Agriculture in the Classroom Council has announced the appointment of Lisa Nevins of Henniker as its new educational director.



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Lisa has a bachelor of science degree from the College of Life Sciences and Agriculture at UNH. As a teacher, she's developed training programs for Girl Scout teaching staff and has been a substitute teacher for the Claremont/Newport schools and the Kearsarge Regional School District.

Lisa and her husband Bob own and operate Morning Mist Farm, focusing mainly on equine care and management. They've raised livestock in conjunction with local 4-H programs. Forestry management, including timber harvest, is also part of their activities.

The NHPGA hopes to continue to present the Green Industry to the state's schoolchildren and we look forward to working with Lisa.

Lisa's at 295 Sheep Davis Road, Concord 03301; the phone number is 603-224-1934.

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Only a few pioneers are using new research

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on perennials
so that plants can be
sold in bloom
earlier in the spring
or summer.

How any customer two plants of the same perennial species, one still vegetative and the other in flower, and it would be a rare customer who shells out more money on foliage than for blooms. Perennial plants are a boon for nursery sales and the many available species make for a much more interesting landscape than the old bedding plant standards. While perennials are an increasingly important aspect of our local industry, however, most growers are producing them in a conventional fashion—only a few pioneers are using new research to force out-of-season flowering on perennials so that plants can be sold in bloom earlier in the spring or summer.

An exciting aspect of growing any ornamental plant is to learn how to trigger its flowering. We are all familiar with fall-blooming poinsettias needing long nights to flower. Many spring- or summer-blooming perennials require some combination of cooling and long days to force a change from vegetative to reproductive growth.

A lot of research has been coming out of Michigan State University and other universities that has resulted in growing blueprints for perennials. Some of this information has been appearing in *Greenhouse Grower* magazine, with a different crop being featured each month. The first series has been pulled together in a booklet "Firing Up Perennials" and the current series that just finished will also be available from Meister Publishing (440-942-2000).

Here at UNH, we are starting to use this information in our teaching of herbaceous landscape plants, so that our students understand how to schedule perennials. For example, *Campanula carpatica* 'Blue Clips' is one of my favorites. This species, with delicate blue (or white for 'White Clips') bell-shaped flowers, makes a beautiful plant in a four-inch container. The key to flowering of *C. carpatica* is simply long days of more than 14 hours or a four-hour night interruption, using fluorescent,

incandescent, or high-pressure sodium lamps.

If you are finishing plants from plugs, bulk up *Campanula* under short days for about ten weeks before you start forcing under long days. Flowering occurs nine weeks later to produce a balanced plant for a four-inch pot.

In contrast, most *Aquilegia* species require a ten-week cooling period at 35-45°F to induce flowering, after which they are "day-neutral" (i.e. photoperiod will not affect flowering time). If you place *Aquilegia* under long days without cooling, most species will never bloom. We have modified our greenhouse cooler to be able to provide a low intensity of fluorescent light (25-50 foot-candles) during the cooling period. *Aquilegia* is an example of a perennial that has a long juvenile stage—plants must reach a critical size before they will respond to cooling or long day treatments.

Note that every species is different. Some species, for example *Coreopsis grandiflora* 'Sunray,' need both a cold- and long-day treatment to flower. Plants, such as *Campanula*, that simply require long days are easy to force. Plants that require a cold treatment need either a cooler with some artificial light or a minimally heated greenhouse that keeps root/crown temperature above 28°F and where heat does not build up during the day.

This is an exciting development that, for some growers, will create a new type of product. If you are interested in the topic, check out the *Greenhouse Grower* articles or attend a greenhouse industry seminar. We thank Van Berkum Nursery for donating some of the *Aquilegia* we are growing. Plugs of *Campanula* and *Coreopsis* were donated by C. Rakers and Sons.

Paul Fisher, Department of Plant Biology, Spaulding Hall G-44, University of New Hampshire, Durham, NH 03824, can be reached by phone at 603-862-4525, by fax at 862-4757, or by e-mail at prf@hopper.unh.edu.

Growing Degree Days

A management tool for the horticultural industry!

UNH Cooperative Extension is working together with the NH Department of Agriculture and the New England Agricultural Statistics to bring you weekly growing degree day (GDD) information throughout the summer months. This pilot year will be a learning experience for us all. . . so, please be patient as we work out the details.

What is a growing degree day? Insects are cold-blooded animals whose activity and development are controlled by the temperature of the surrounding environment. It has long been recognized that growth could be measured indirectly by tracking temperature over time once the lower (baseline) and upper threshold temperatures for a particular insect were known. This would allow us to predict events in an insect's life cycle during the season by measuring growth in terms of temperature over time.

This measurement is called a "growing degree day". Currently, 50°F is used as a standard baseline for all insect and mite pests of woody plants.

Why a lower threshold number of 50 degrees? This temperature was chosen as plant and insect growth in the northeast is thought to start between 45°F and 55°F. Obviously, the further an insect or mite's true baseline is from 50°F, the less accurate these range numbers are. Unfortunately, accurate baseline threshold temperatures are known for only a relatively few insect species.

How are growing degree days measured? The simplest calculation of a degree day starts with the recording of maximum and minimum temperatures. These two numbers are added together and divided by two to determine an average temperature for the day. This average number is then subtracted from a lower threshold number of 50°F. The result is the GDD for that day. (Negative numbers are not counted!) These

numbers are accumulated throughout the growing season and may number in the thousands by summer's end.

How will I receive and use GDD information? As you would expect, GDD data will vary greatly throughout the state. For this reason, New England Agricultural Statistics is supporting GDD data from 19 NH sites. Fortunately, handy charts have been developed which list particular insects and the GDD needed for their development. Beginning May 3, 1999, this information will be disseminated weekly to the public through a variety of means:

- **WEB PAGE** (<http://ceinfo.unh.edu>): UNH Cooperative Extension's web site will devote an special projects area to this project and will list all GDD sites as well as a comprehensive breakdown of expected insect emergence and action tips for that particular pest. When you arrive at our Cooperative Extension home page, click on the "Special Projects" icon. This will lead you a page which includes a listing entitled "Growing Degree Days"—click on this and you'll be ready to receive information.

- **TELEPHONE MESSAGE** at 862-4800: A recorded message will be updated weekly listing GDD for selected sites as well as anticipated insect emergence.

- **WEEKLY MARKET BULLETIN**: Selected GDD sites will be profiled each week and insect alerts will be highlighted.

For more information, contact Nancy Adams, Agriculture Educator, Cooperative Extension, Rockingham County, at 603-679-5616.

Summer Horticulture Courses at the Thompson School

The Thompson School at UNH offers six courses in ornamental horticulture this summer. These are listed below. Some may require prerequisites; all have a \$10.00 special fee.

- HT236 Pest Management: Insects 5/24-7/30 T 5-8pm
- HT237 Pest Management: Weeds 6/28-7/30 MW 5-8pm
- HT239 Pest Management Control Applications 5/24-6/25 MW 5-8pm
- HT254 Water Management 5/24-7/30 M 9-12
- HT257 Woody Landscape Plants 5/24-7/30 Th 4-8pm
- HT263 Landscape Construction and Maintenance 5/24-7/2 Th 5-8:30pm

You can enroll by phoning the Division of Continuing Education at 603-862-2015. For information on credit, content, the part-time associate's degree program, or the diploma in landscape horticulture, call 603-862-1035. Additional courses are offered at the UNH Department of Plant Biology.

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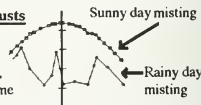


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The Newest Acquisition

Griffin Greenhouse and Nursery Supplies, with corporate headquarters in Tewksbury, Massachusetts, recently announced the acquisition of D&L Grower Supplies, Leola, Pennsylvania.

The Leola facility will be operated as a branch of Griffin Greenhouse and Nursery Supplies and brings the number of branches to eight. The D&L staff will become griffin employees. The facility will be managed by Rich Craver, former manager of the Latham, New York, facility. The acquisition also increases the company's market share in the region through the incorporation of additional product lines.

For more information, call Tewksbury at 978-851-4346 or the

Leola branch at 717-656-0809.

A New 18-Acre Range (Plugged In, Issue 6, 1998)

Suffield, CT: At least two years in the works, plans for a new 18-acre greenhouse here that will grow tomatoes and peppers have been announced by both the State of Connecticut and the Dutch cooperative that will build the project.

The project (costing about 13 million dollars) includes the greenhouse and a 100,000 square-foot packing and distribution center on 42 acres in northern Suffield. The site was picked for its proximity to Bradley International Airport.

The state economic development authorities have been pushing the project by the Rainbow Growers Group in the hopes of expanding

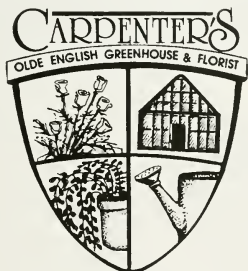
the role of Bradley as an international hub.

Rainbow officials say they plan to hire 50 employees to run the greenhouse and another 120 in the distribution center.

1999's New England Grows Some Facts and Figures

There were 11,812 attendees at this year's New England Grows. There were over 900 vendor displays in 190,000 square feet of exhibition space. And 25 hours of educational training. And the New England states' Cooperative Extension Systems received grants totaling \$30,000.

For those who plan ahead, next year's conference is scheduled for January 27-29 in Boston. For more, call 508-653-3009.



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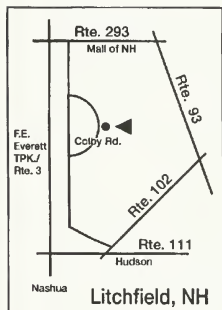
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Like Bumps on a Log

Scale insects can give woody or ornamentals owners and interior-scapers a real headache. Not only are they difficult to control, but they can be difficult to diagnose as well.

Scale insects cover a large grouping from the order *Hemiptera* and sub-order *Homoptera* (just like aphids and whiteflies). The scale sub-order is divided into three families: *coccidae*, *diaspididae*, and *pseudococcidae*, commonly known as soft-scales, armored scales, and mealybugs, respectively.

Soft scales, in general, are large—up to an eighth of an inch. The females are covered—in their adult stage—with a hard body covering (which leads many people to believe these are armored scales). They can produce honeydew, a sticky, sugary excrement which may attract ants. Ant will harvest the honeydew and provide some protection to the scales from their natural enemies. Although the adult males are winged, they are rarely seen. The females, on the other hand, are seen as “bumps” which often resemble bark features in color and shape. The immature “crawler” stage is often hidden by the female’s cover, but they are usu-

ally more mobile as they seek out their final feeding spot.

Armored scales are, in general, very small (down to .2mm). They, like their soft cousins, have a tough cover. The males are winged and rarely seen; the crawlers are similar as well—just a lot smaller. One big difference is that armored scales produce no honeydew. This makes them even more difficult to detect.

Mealybugs lack the hard covering, but the males are winged and rarely seen and the crawlers are similar to those of the soft scales. They also produce a lot of honeydew and attract ants, but, for most people, they are not considered a scale insect. Mealybugs have waxy coats which, like their cousins’ hard coverings, provide protection. Like many other scales, the eggs of many mealybug species are protected, often inside a waxy, cottony substance. Some mealybugs give birth to live young, like aphids.

Control can be difficult. Chemicals must be formulated to penetrate the protective coverings. Some scales have toxins in their saliva that can cause leave to curl protectively around them. Parasitic biological controls can be difficult to use be-

cause many are species-specific (you must know exactly what you’re dealing with). Horticultural oils can be used successfully if applied thoroughly enough to coat and smother the insects. Use cautiously, as horticultural oils—especially when applied heavily—can cause phytotoxicity in some plants.

So what’s the best cure? Detect scales early by scouting properly; hand-apply oils and such; locate the more susceptible crawlers and use soap and other physical products on them; use predatory biological controls which care less about species and are more opportunistic; keep your plants clean and healthy, putting them outside whenever possible to let Mother Nature take care of her own. Some systemic chemicals can (according to the manufacturers) provide some level of control, but are typically very harsh. Perhaps it might be better to simply discard the affected plant material and try again with fresh stock—although this can be a costly option. Sometimes, however, it can be your least expensive fix.

Mike Cherim, president of the Green Spot, Ltd., can be reached at 603-942-8925.



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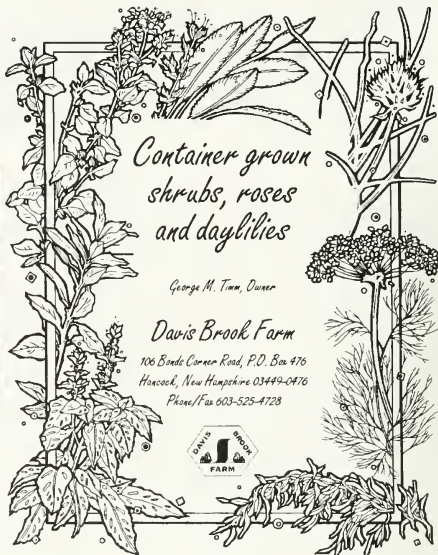


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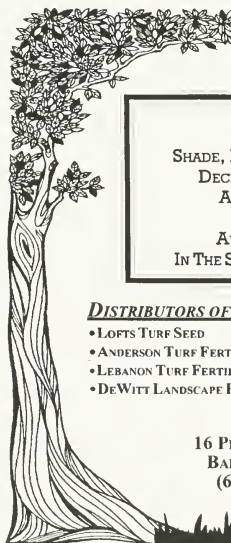
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It's Spring . . . I've Got the Gardening Bug for Fruits

WILLIAM LORD

Whar are the best types of fruit trees? Every variety listed in the dozens of catalogs that come in this time of year sounds like perfection. But not every variety is suited to New Hampshire. What does work?

Apples are perhaps the most widely grown tree fruits. They are also the most difficult to grow well. The key issue that faces most home growers is pest control and the key pest that frustrates home growers is a disease called apple scab. While you can manage this pest by removing all leaves from the orchard in the autumn and spraying with fungicides in the spring and early summer, most home gardeners will not have super success against this pest. For that reason, scab-resistant varieties of apples are a good choice. The best scab-resistant apples are:

Liberty October 1, red, large, crisp with good flavor
Redfree September 1, red with crisp, white flesh, good flavor
Prima mid-September, red with OK flavor, does not store

There are many other scab-resistant varieties to try, including *William's Pride*, *Dayton*, and *Jonafree*.

What about regular varieties?

(Yes, they get apple scab.) Of the scab-susceptible apple cultivars, *McIntosh*, *Macoun*, and *Cortland* are by far the most widely grown in New Hampshire: they are productive, extremely winter hardy, but very susceptible to scab. There are several newer cultivars that have consumers excited. They are crisp, have great flavor, and store very well: *Gala*, *Fuji*, *Mutsu*, and *Honeycrisp* are the most popular today. Of these, only *Honeycrisp* will survive the harsh winters of northern New Hampshire. In addition, *Mutsu* and *Fuji* ripen in October, so sites that frost out early in autumn will not work for these cultivars.

Pears: *Bartlett* and *Bosc* are still the most popular. *Bartlett* ripens in early September; *Bosc*, about October first. Other great pears include *Seckel* (small, crisp, and sweet) and *Clapp's Favorite*. Northern growers should try *Flemish Beauty* and *Nova*.

Peaches and Nectarines: *Reliance* is the hardest

peach, often producing following -25F. But if the grower has a great site where temperatures rarely drop below -10 or -12F, and spring frosts are not a problem, there are better ones when it comes to flavor. *Red Haven*, *Canadian Harmony*, and *Madison* will fill August and early September with great tasting yellow peaches. *Sugar May* and *White Lady* are two white-fleshed peaches that are incredibly sweet and juicy. For nectarines (peaches without the fuzz), *Mercrest* (like *Reliance* peach, from UNH and extremely hardy) and *Hardired* are good choices.

Other Tree Fruits:

SOUR OR PIE CHERRY. *Montmorency* is the best. *Meteor* and *Northstar* will produce smaller trees which make sense for the home gardener, but flavor is not quite up to *Montmorency* standards. Sour cherries are very hardy, but they bloom early, so spring frosts are a problem.

SWEET CHERRY. Like sour cherries, these bloom very early. In addition, sweet cherries are not very hardy (-10F often gets the flower buds). *Hedelfingen*, *Sam*, *Van*, and *Kristin* are all great to eat—if you get them past the winter cold, spring frosts, and hungry birds!

PLUMS. I like the prunes the best. They are extra sweet. *Stanley* is the most popular and it is at least partially self-fertile. *Early Italian* and *Earlibue* are other good choices. They ripen in September. Japanese plums (not self-fertile) are great too, and they ripen in August. *Ozark Premier* is my favorite—large, great flavor. *Methley*, *Burbank*, and *Fellemburg* are all very good too. *Shiro* is a popular yellow one, but it is a poor pollinator for other plums.

Should I plant dwarf trees?

For apples, the answer is yes! Dwarf trees bear fruit younger in life than larger trees and take up much less space. Pruning and pest control are much easier too. Popular dwarf rootstocks include M.26 and M.9. A stake for support and tree trunk training is essential for dwarf apples.

Dwarf pears also bear fruit young in life, but that life can be short outside southern New Hampshire. Dwarf pears are produced by grafting pears onto

quince roots. Since quince is only hardy to about -10°F, this presents a real risk for injury. Protect the quince part of the tree by mounding soil around the trunk to just above the graft union. Apply this protective soil in early November, and remove it as soon as the ground thaws in spring.

Dwarf cherries are starting to hit the market. This is great since cherry trees are large, often growing to 20 feet or more. So far, there are no good dwarf plums or peaches and nectarines for New Hampshire.

How do I care for my new fruit tree?

Fertilizer is the first thing most people reach for after their new fruit trees are planted. I don't like to fertilize new trees until the soil around the roots is settled well - figure on three weeks or one good soaking rain to get the job done. I use regular garden fertilizer like 10-10-10 (about a half-pound for new trees)—sometimes I follow it up with a second application two or three weeks after the first. I love to make the second application just as a thunderstorm is rolling in. When I fertilize, I scatter the fertilizer in a wide circular band around the tree, avoiding the 18 inches nearest the trunk. In general, time-release fertilizers are not used for fruit trees as we do not want to push late season growth. Tree spikes just aren't worth the money.

These fertilizer recommendations assume the tree was planted correctly. The planting hole should be wide enough to accommodate the roots. The graft union of the tree (the noticeable bump on the lower trunk where the variety was grafted onto the root system) should be an inch or two above ground after the planting hole is refilled level with the surrounding cover. I do not recommend leaving a depression near the trunk to catch water. Fertilizer can be washed into this hole, concentrating near the trunk and causing injury. And if you forget to fill in the depression before winter, ice accumulation can cause injury too.

Once apple trees are six or seven years old, boron should be applied in the spring every third year. Boron improves fruit set and fruit quality. I use borax (11.1% Boron), about four ounces for dwarf trees and up to three quarters of a pound for old standard apple trees. Do not apply boron to other fruit trees—it is just a waste of money and too much is as bad as too little.

Pruning and training newly set fruit trees is important, but many new home fruit-growers just can't bear to cut them. For apples and pears, cherries, and prune-type plums, perhaps the most important step in tree training is planting a stake with the tree. These trees are all trained to have a single trunk and a shape somewhat like a Christmas tree. Some gardeners rip pressure-treated 2 x 4s lengthwise. These two-inch by two-inch, eight-foot stakes are placed four or five

inches from the tree and should be set three feet in the ground (deep enough to prevent frost-heaving). The main trunk can be tied loosely to the stake with almost anything that will not cut the bark. I like to use chain tie (available at most garden centers) or black plastic electrical tape.

Once the tree trunk is tied to the stake, pruning is easy. If there is a branch (or two) that is large and upright trying to be trunk number two, remove it by cutting it back all the way to the trunk. Generally, all other branches are left for at least this first year. They should not be shortened (tipped or headed). If these branches are growing too upright, simply tie or weigh them down so they are almost, but not quite, flat (2:00 and 10:00, using the numbers of a clock as a guide). I like to use soft twine to do the job. Tie the twine loosely around the branch about two-thirds the length away from the trunk. Anchor the twine to the stake or to a plastic milk jug filled with sand or water.

New peach trees (and nectarines) are trained to an open center. At planting, select three or four good branches about two feet above the ground as the main laterals. Cut the center of the tree out above this point and shorten those laterals by about a third.

Japanese plum trees have minds of their own when it comes to tree-training. Usually, the trunk will wander off in one direction and a branch or two will grow well in the opposite direction, giving the tree a nice spreading shape. This first year, remove any branches with very narrow crotches and any branches more than half the diameter of the trunk.

What about 'varmits'? Deer, mice (voles actually), and rabbits all love fruit trees. Controlling these critters can give the home gardener fits. The only thing that works well if you have a lot of deer around is fencing. We generally recommend an eight-foot-high fence of woven wire, but this is seldom an option the home grower finds attractive. Deer repellents are somewhat effective, but when deer are hungry, they just don't work. Soap bars (leave the wrapper on so the soap lasts longer) can be hung from the branches to deter deer. The effective range of soap is about three feet. Some garden centers sell odor and taste repellents that can be sprayed on the tree to deter feeding. Hot pepper sprays are also used with some success. One company is now selling garlic juice tubes to hang on trees as a deer control device but, like all repellents, success is limited when deer pressure is high.

Voies (or mice as they are often called) are easier to manage. Fruit trees planted in a lawn environment seldom are attacked since the short grass provides voles little cover from predators. When snows are deep, however, they can move into these low-risk areas. Wire guards around the bases of trees will provide

protection from these voles and chew-happy rabbits too. I like to use quarter-inch mesh hardware cloth. A piece 18 inches by 18 inches will form a nice cylinder of protection around the trunk. It needs to be securely closed with wire ties and should be set into the soil about an inch. Rabbits like to chew on low-hanging branches too, so the use of taste repellents may be needed, especially in the seacoast area where cotton-tails are present.

One tool most commercial growers use is natural predation. Foxes and coyotes are welcome guests in a commercial orchard. And many commercial growers set up kestrel nest boxes and hawk sitting poles to encourage these important predators to set up house-keeping. These could be valuable tools for the home grower as well.

Why don't my fruit trees bear fruit? is a question I often hear. I usually run through a few quick points to determine the cause.

Are your fruit trees in full sun all day long?

Sun is the key and no fruit tree bears much or bears early in life when it is growing in the shade.

How old are your trees?

While peaches and nectarines, plums, and dwarf apples often bear by the third year, there are no guarantees. And pears and semi-dwarf apples often take five or six years to settle into a fruiting mode. Apples on seedling roots rarely fruit before year ten!

How much fertilizer are you applying?

Ideally, young trees will grow perhaps 16 to 18 inches a year for the first three years or so. If trees five years old or more are growing this much, fruiting will likely be delayed. Back off on the fertilizer for a couple of years to give the trees a chance to settle down.

What about pollination?

Apples, pears, Japanese plums, sweet cherries—all these require cross-pollination to set fruit, so the home gardener will need at least two different apple varieties, two different pear varieties, etc. While just two varieties of apple such as Cortland and McIntosh in theory could do the job, I always recommend at least three to increase the odds. (For apples, Golden Delicious is one variety that pollinates almost any other apple, so making it part of the mix is a good move). Not all varieties produce pollen that is fertile, so if one of these happens to be in the mix, you will need one more. Northern Spy, Jonagold, Baldwin, Gravenstein, and Mutsu are popular varieties that do not produce good pollen. With pears, bee activity tends to be low, so I always recommend at least three different varieties.

What about bees?

Bumble bees and other solitary bees are the ideal, but populations of these wild pollinators are variable, so honey bees are often used to insure a crop. Keeping a bee hive or two is a great hobby, especially for kids. Of course, some tree fruits are self-fruitful—just one tree is all that is needed. Peaches (except the variety J.H.Hale), nectarines, and sour or pie cherries like Montmorency are self-fruitful types. Some prune plums are, some aren't; so planting two varieties of these is the best course of action.

Bill Lord is Extension Fruit Specialist, UNH Cooperative Extension. His phone number is 603-862-3203; his e-mail address, <william.lord@unh.edu>.



PIONEER POINTERS

Protect Your Assets

The 1996 Freedom to Farm Bill eliminated disaster payments and other farm support programs. In the event of a disaster, this leaves you with two choices: the federally subsidized crop insurance program or your wallet. With the tremendous investment that growers have in inventory that can be adversely affected by weather conditions beyond the grower's control, we suggest that you review the options available under the Federal Crop Insurance Program. The loss of borrowed and personal capital is a significant reason for business failure today.

The 1999 Nursery/Greenhouse Crop Insurance Program was recently revised and now provides coverage for both containerized (three-inch pots and up) and in-ground stock. Coverage starts at the 50% level and can go up to 75%. The cost for the basic catastrophic (CAT) coverage is \$60, per county. This is a minimal cost to protect a portion of your investment. Unit structure has also been modified and is the most important factor in the risk management process.

Growers need to be aware of the options that are available for crop insurance in order to be able to make the decisions that will both protect their capital and the capital invested through borrowing. Your local First Pioneer Farm Credit office will be able to get you in contact with a licensed crop insurance agent. For more, call 1-800-825-3252. (JF)

Candia Gardens

"We're Known for Our Geraniums"

In the 1950s, it was "The Pansy Farm"—old-timers recall working summers in the production fields. "Over the years," Beth Mortensen muses, "they must have employed hundreds. Everyone seems to have a story...."

Then a new owner built three greenhouses and a roadside shop and set up a garden center—but this went out of business as well.

So Beth and Wayne Mortensen are relative newcomers—they moved here in December of 1990.

Beth and Wayne were married and Wayne had already worked in the industry eight years ("good experience—I got to learn the nuts-and-bolts") before he went to Penn State for a bachelor's in horticulture and a master's in plant nutrition. Beth had already earned a degree in marketing from Central Connecticut.

After college, Wayne moved around; both he and Beth were at A.N. Pierson, a rose grower in Cromwell, Connecticut, when he decided that "if I had to get up and fix the burner at midnight, I'd rather do it for myself."

They knew
New Hampshire
through vis-

its to Beth's aunt in New London and had already begun looking—Brookfield, Littleton....

The Candia property needed work—the place had been vacant awhile. After a first look, the Mortensens returned to Connecticut...but the price and location seemed right.

At first, they worked to revive the garden center, filling the 20'x30' wooden structure at the edge of the road with hardgoods, bagged media, seeds, and bulbs, along with material from their greenhouses.

In two of the houses were raised, soil-filled beds used for cut flower production. So it seemed natural to grow cut flowers—Asiatic lilies, iris, freesia. They planted in two-week cycles.

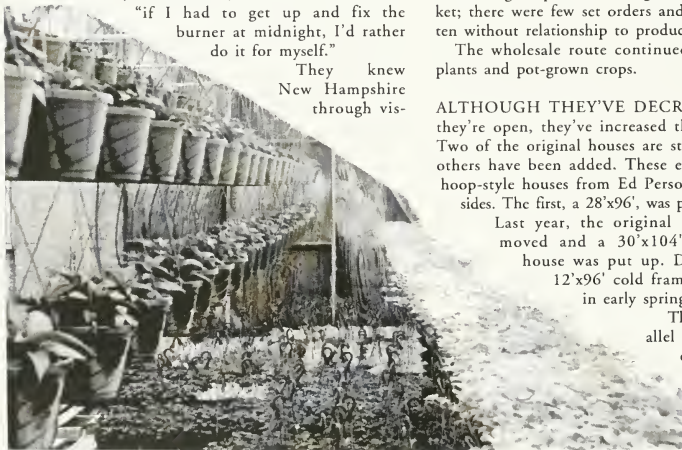
They went through the yellow pages and visited every florist listed, offering them samples of their crops to give them a chance to see what would sell. A route developed—they visited customers three times a week, but it didn't seem to be the right road: it was time-consuming; imports were beginning to enter the market; there were few set orders and sales fluctuated, often without relationship to production.

The wholesale route continued, but with bedding plants and pot-grown crops.

ALTHOUGH THEY'VE DECREASED the seasons they're open, they've increased the size of the range. Two of the original houses are still in use—and eight others have been added. These eight are double-poly hoop-style houses from Ed Person. Most have roll-up sides. The first, a 28'x96', was put up in 1992.

Last year, the original glass house was removed and a 30'x104' double-poly retail house was put up. Directly behind it, a 12'x96' cold frame is used for pansies in early spring.

The ten houses are parallel to each other, their ends facing the driveway sloping gently upward from the road.



Two hundred feet of pipe bring water from a well outside their back door to the greenhouse range. The well is the subject of legend: the man drilled for a week; "I'll drill for one more morning," the man said; toward noon, the drill suddenly dropped sixty feet; water poured out—he'd hit an underground lake. "We could have 300 gallons a minute," Wayne says; "the only thing that stops us is the diameter of the pipe. During the drought twenty years ago, this well was to be used to furnish water for this end of town. So we have water—but in spring, we need it."

A CLEAR IDEA of how they want to live their lives has shaped the business. Hard looks were taken at what produced revenue. Areas which seemed to produce only "work for work's sake" were discarded—two years ago, for example, they stopped growing poinsettias. They now concentrate on spring material and, in September, mums.

You could say the season begins in the fall. Fourteen thousand 4 1/2-inch geranium pots and 6500 806s (they'll fill 500 more in the spring) are pre-filled and stored.

One house is opened in January for hangers and pansies; 2500 bare-root perennials arrive in February and are potted up in gallon containers, but March is when the houses fill. They buy plugs, do little seeding (mostly vining vegetables).

"We're known for our geraniums—we grow 15,000: 4 1/2-, seven-, and ten-inch. We have one house of red; one of mixed colors (pinks, hot pinks, salmons, whites). But we're lacking a nice lavender. I used to grow one called 'Precious Lavender.' It truly lavender. People loved it...people like color, will buy whatever's in bloom. But they are always looking for something different."

It's less expensive to buy in unrooted cuttings which they root in jiffy-7s on a heating table.

Both geranium houses have rolling benches and TAK trough watering. Beth and Wayne see this as one of their best investments: "This has been great—we've saved hours of watering time and have grown a good, more uniform crop."

Most of the big labor-saving devices seem too expensive ("A pot filler would be nice, but it would take years to get a reasonable payback"), but small innova-

tions have made a difference. Shelving—a Person idea—along the sides of the greenhouses the width of a flat, angle braces supporting conduit piping three feet off the ground, create room for 200 more flats per house. ("By doing this, we've basically picked up the growing space of another full house.")

Hangers are grown in a separate house that's kept on the warm side. Eight hundred New Guineas...and 2200 fuchsia, scavola, helichrysum, bacopa.... "we try to have a little of everything." This year's new items include variegated petunias and hanging snapdragons.

The houses are full by the first week in April—this is the crop. One other shipment of plugs arrives in May. The material fills one house and is used for late sales.

The business opens at the end of April (8:30-6, seven days a week) and closes on the fourth of July. It reopens for mum sales the last week of August and stays open through September.

A white wooden gazebo at the side of the road is filled with color. (The gazebo is actually a sandbox for small children: the entrance faces into the garden center; there's clean sand on the floor and plenty of pails and small shovels.) Benches of perennials are put out on a small asphalt area beside it; in the shop, plant displays surround wrought-iron lawn furniture where customers can sit and read books and magazines filled with gardening ideas.

A short, wide, poly tunnel connects the shop to the retail house. Although this house is used for growing, once the sales season begins, the long broad bench in the center is kept filled with material from the other houses. "The season's short, but we try to offer a wide range of everything—herbs, vegetables, bedding plants. And lots of hangers."

Mum cuttings arrive the last week of May; planted directly into 5000 two-gallon containers and 250 bushel baskets. They grow twenty varieties, use Florel to retard growth. Florel works well (although on one type, the flowers are inside the new growth): basically, there's no hand-pinching. Plants are brought to the retail area; it's entirely self-serve. There have never been problems.

They originally hoped for a 50/50 wholesale/retail mix, but it's about 70% wholesale. There are informal general orders before the season starts and a seven-

In New Hampshire,
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To consciously choose
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They've needed to
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their own energies wisely.

day-a-week route, but "nothing's fixed. One of our selling points is that we'll deliver—day or night—anytime something's needed."

IN NEW HAMPSHIRE, the easiest thing to do is to fill your life with work. To consciously choose not to do this requires its own forms of discipline. They've needed to make the operation cost-efficient and use their energies wisely.

They do most of the work themselves. In spring, eight people—housewives and high school students—are hired part-time, but it is their own long hours that make the place run.

Three years ago, a two-story all-purpose storage barn was built across the driveway from the upper houses, replacing a tractor trailer set up on the site. "The additional storage allows us to buy in bulk—media, pots, supplies—when the price is right."

They have two delivery vehicles. They plan to keep the van, but hope to sell the bigger truck (an 8'x15' box) and lease a similar truck for the three months each year it's needed.

Both say that spending time with their children—Craig (13) and Lisa (11)—is their major priority. "We want to enjoy them now. They grow fast—in ten years, they may not be around." So, after the fourth of July, they pay someone to feed the mums and keep an eye on the place while they're off camping or at the beach.

In the fall, Wayne substitute-teaches at the Candia elementary school (grades five through eight) and coaches basketball—and Beth has a year-round part-time job as a bookkeeper, but someone is home when the kids come home from school and there's time for hiking and skiing.

"Customers are local. One man makes a day of it and comes up from Boston each fall to buy his mums, but most come from Candia, Auburn, Deerfield, Raymond....

Candia is still a small town and marketing works best when it's on a personal level. They no longer advertise in local papers, but they are one of the businesses that's on the placemats used for the breakfasts held every Sunday New Year's to Memorial Day at the Masonic Hall. They give flowers to the cub scouts who, in turn, give them to their mothers on Mother's Day. And they donate plant material for the plantings at the school, the town hall, the library....

Their lives and business mesh nicely with those in the town around them. Growth and development may someday bring changes, but right now, the fit seems about perfect. (BP)

Candia Gardens is at 544 High Street, Candia, New Hampshire 03034. The phone number is 603-483-5692.



NOTES

How good are your diagnostic skills? I often get called in to evaluate problems at greenhouses and nurseries and I've found that most growers will diagnose a problem using the issues with which he or she is most familiar. Possibilities outside their areas of expertise are rarely considered. Keeping an open mind, without letting preconceived ideas affect your thinking, is key to finding causes and solutions.

Sometimes, growers are so emotionally tied to their crops that they can't take that important step back in order to see the larger picture. Recently, a grower was complaining to me that his New Guinea impatiens was rooting poorly; he was convinced it was disease-related. I looked at the roots and agreed he had a problem, but I wasn't sure disease was its cause. The soil felt cool to the touch. He explained that he had his sensors set at 75°F. I questioned the setting and he showed me, on a computer, the setting of 75°F. I asked for a soil thermometer and discovered—much to his embarrassment—that the actual temperature was 58°F—too cool to root a New Guinea—and a lot of other plants as well.

Certain components are needed to make any plant grow and a good diagnostician should be able to evaluate each one. Nutrition (which includes water quality) can easily be evaluated by a media, water, and/or tissue test. Pests (any disease or insect) may take longer to screen for since many diagnostic labs can be slow in turn-around. The cultural component is very broad and ranges from watering habits, temperature (day/night, air, soil), spacing, and variety. Variety is often discounted, but because so much breeding is occurring today, many new varieties show characteristics and growth habits not usual in the traditional types.

Jim Zablocki, technical manager of the Northern Horticultural Group, Scotts company, can be reached at 603-224-5583.

Wanted—Dead or Alive— Dealing with Exotic Invaders

DIANE E. YORKE



At first it was believed vandals had drilled holes into the street trees of Brooklyn, New York. Soon, however, a six-legged culprit was found—*Anoplophora glabripennis*, a beetle from the wood-boring Cerambycidae family. Also called the Asian long-horned beetle, it was discovered on August 19, 1996. Its name discloses its native homeland of Japan, Korea, and China. It also gives away a distinguishing characteristic—its antennae, black with white rings, are longer than the beetle itself. What its name doesn't tell is that it is a major tree-killing pest and, if not eradicated, could have a devastating impact on North American forests. Within a month of this first discovery in the United States, a second infestation was found in Amityville, about 30 miles east of Brooklyn.

No one knows how the beetle got to New York, or how long it had been there. Though border entrances are guarded to keep such pests from infiltrating, they often sneak in, concealed in the wood used to package goods during shipment. This is especially true for wood-borers such as the Asian long-horned beetle that can be moved in any and all of its life stages in wooden packing materials, cut logs, branches, wood debris, or firewood.

It's believed this alien was a New York resident for up to ten years, even though its discovery and reputation remained unknown. Now its description with mug shots is plastered everywhere in an attempt to get rid of it. This bullet shaped beetle grows up to one and a

half inches long, and is shiny, coal black with white spots. Adults can be found from May to October when they emerge from exit holes of infested trees. After mating, females lay a single egg in a chewed-out crevice of tree bark. When the larvae hatch, they chew inward, continuing to move to the heartwood where they dig tunnels and stay until emerging as adults the next year to start the cycle over. Signs of the beetle include exit holes up to one-half inch in diameter anywhere on the tree—including the roots, dieback, and piles of sawdust at the base of trees and branch junctures.

Unlike many in its family, the Asian long-horned beetle attacks and kills healthy trees along with stressed ones. It doesn't discriminate against young or old, big or small—even inhabiting trees two to three inches in diameter. In its homeland, it dines on over 50 tree species. Here, its diet includes silver maple, elm, poplar, boxelder, sycamore, willow, and birch—though it has a preference for horse chestnut and sugar and Norway maples. It remains unknown what else may be palatable to the beetle in this new territory, but it is clear that, if not eliminated, it has the potential to make a huge ecological and economic impact. In Brooklyn, there are 110,000 street trees—27% are Norway maple. Then there are 2.7 million trees in New York City to contend with, should it spread there. And its gastronomic inclination for sugar maples alone has more than just the maple industry anxious about the prospect of this beetle becoming loose in the forests.

Adding to the concern, no chemical has been effective in eliminating the beetle thus far. Systemic chemicals can't reach it deep in the heartwood where it spends most of its life. Other pesticides

Unlike many in its family,

the Asian long-horned beetle

attacks and kills healthy trees

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that could be applied would need to cover all tree parts and last from May to October when the beetle is active. This strategy, however, would result in unacceptable levels of chemicals in populated areas and would be impractical, if not impossible, in forested ones. As a result, the solution has been to cut down all infested trees, then chip and burn them. The remaining stumps are ground to a depth of up to 18 inches below the surface. To further limit the beetles spread, quarantines have been placed around all infested areas to prohibit the movement of trees and tree materials. The war against this pest continues in New York and now in Chicago, with its discovery there in the summer of 1998. However, it isn't the only beetle battle being waged.

The smaller Japanese cedar long-horned beetle, *Callidiellum rufipenne*, was discovered in Connecticut on September 22, 1998, where it arrived on an arborvitae from British Columbia. It has since been found in three other Connecticut locations. This deep blue-to-black beetle with a reddish abdomen is also a wood-borer that attacks arborvitae, juniper, cedar, and pine trees. Moveable in all of its living stages in in-

fested wood and wood products as well as in live trees, it has the potential to affect the nursery and greenhouse industry. Because of the fall discovery, it is believed the beetle hasn't become established. However,

the assault has begun. Connecticut has quarantined the movement of nursery and greenhouse stock in and out of the state, and "Wanted" posters are about to come off the press to alert the public in an attempt to squash this new "bad bug."

The greatest chance of eliminating either beetle comes through awareness. The success in getting the Asian long-horned beetle population down has been an informed and involved public. It is hopeful that as the Japanese cedar long-horned beetle emerges from exit holes into new territory for the first time this coming spring, an informed public will be ready and waiting to bid it goodbye.

For more information or a "Wanted Poster" for these beetles call the Forest Service at 603-868-7709.

Diane E. Yorke is a natural resource biologist working in information and education with the USDA Forest Service in Durham, New Hampshire.

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Lavender is the "Herb of the Year" for 1999. One of the plants that most often comes to mind when we think of herb gardens, it's a wonderful choice. We think of Victorian women and their Yardley's Lavender soap; we think of lavender and old lace for weddings; and nowadays, with herbs in the forefront of many gardens, we think of ways to use lavender in the landscape.

Lavender originated around the Mediterranean Sea and is still extensively grown there. It's cultivated in many other parts of the world as well. It has a mounded habit, gray-green foliage, and spike-like wands of flowers usually in varying shades of blue. There are over twenty-five varieties of the *Lavandula* genus and, even here in our chilled New Hampshire soils, there are lavenders that will grow exceedingly well. Here at the Urban Forestry Center in Portsmouth, there is a sweep of lavender that I grew from seeds nearly twenty years ago. It began its reign in the formal herb garden, but outgrew its border in about ten years. Unable to simply dig it up and discard it, we transplanted the huge plants to a sunny meadow spot. And it grew—more magnificently than ever! It's still there, calling the bees for miles around, providing a harvest for sachets, bouquets, and potpourris, and giving pleasure to all who visit.

So my experience has been best with the English lavender,

Lavandula angustifolia, but many other lavenders can be successfully grown in New England. The lavandins (*L.x intermedia*) are sterile hybrids of *L. angustifolia* and the tender *L. spica*. Both are hardy to Zone 5 and are valued for the quality of their essential oils as well as for their visual appeal. We've successfully grown the Hidcote cultivar, the Munstead, and we've tried the new Lady Lavender, which is supposed to bloom in its very first year. Ours did, but it has taken awhile for it to reach much size and is still not as magnificent as the transplanted border in the meadow.

All this suggests one of the secrets of growing lavender: it must have full sun. I've read of lavender growing successfully with as little as four hours of sunlight a day, but I've yet to see it.

A neutral to slightly alkaline soil is best, so here in New Hampshire, plan on adding lime to the bed when you first prepare it and each year after. A pH of 6.4 to 8 is optimal.

Excellent drainage is also crucial. Don't even think about lavender if you have clay soil or soggy conditions. Go for raised beds if you need to.

At the Cape Cod Lavender Farm (six wonderful acres overlooking Island Pond in Harwich), one can see over 10,000 lavender plants and learn some tricks of lavender growing. One that impressed me was the "mulch" of white sand around each

plant and along the production rows. The sand keeps the weeds down and reflects the light and heat up into the plant, perhaps replicating the Mediterranean climate that these plants like. June is the best time to visit. (If interested, see their web site at www.capecod.net/lavender or call 508-432-8397.)

Good air circulation is also a must. Space the plants two-to-three feet apart and avoid putting them too close to other plants or buildings. Clear out accumulated leaves and debris and thin out the branches of the more densely growing bushes. Prune old hard wood in the spring to promote new growth. Water is important in the early part of the season, but mature plants are more able to tolerate dry conditions.

Propagation by layering low-growing branches is very easy. I let the baby plants grow a full year before cutting them from the mother plants and transplanting them elsewhere. As I mentioned, I had good luck with seed from a simple package of English lavender. I needed 75 plants for my planned border—I succeeded in growing 110. I started them under lights in my basement, grew them on for a year in my back yard; from there they went to the herb garden and eventually to the meadow. Easy! And well worth the effort—this year or any other.

Tanya Jackson, a well-known area herbalist, can be reached at 603-431-8011.



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NHPGA Twilight Meeting/ Garden Center Evaluation Workshop

THURSDAY, JUNE 24

SPIDER WEB GARDENS, CENTER TUFTONBORO

Spider Web Gardens was begun by Bill Stockman's grandfather back in 1938, making it one of the older family-run Green Industry enterprises in the state.

But Spider Web continues to evolve and grow. Today it includes 20,000 square feet of production area in 13 greenhouses, two acres of field-grown perennials, and three acres of nursery stock. Bill will discuss his ongoing expansion plans—what's done and what's coming.

Spider Web is allowing use of their business in order to let people learn how to evaluate their own. Prior to the meeting, from 4 until 5:30, Dave Seavey, UNH Cooperative Extension, will lead a workshop on garden center evaluation. Dave will take the comments of the participants and combine them into a single report. At a later date (to be decided by the participants), there will be a follow-up meeting to go over the final report. This would be a very useful exercise for the owner of any retail operation.

Food will be served. We need to know the numbers attending and ask that you call Ann Hilton at 603-435-6425 by June 18 if you plan to attend. For information on the workshop, call Dave Seavey at 603-225-5505.

A flier will be sent closer to the date with more information and directions.

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PERMIT NO. 43